

**REMARKS**

Applicant would like to thank the Examiner for the detailed remarks. The above amendment proposes cancelling claim 29 and incorporating the subject matter therein into claim 28. New claim 30 is also presented. If the amendments are entered, claims 1-16, 26-28, and 30 would be pending in the application. Claims 1-16 and 26-29 are currently pending.

Claims 1-4, 10-13, and 26-29 were rejected under §103(a) as being unpatentable over Watson. The Examiner continues to assert that Watson teaches that scandium, erbium, and ytterbium are equivalent  $L1_2$  formers. Additionally, the Examiner argues that the use of scandium is merely a preferred embodiment and that Watson therefore does not teach away from using the alternative (MPEP 2123). However, the Examiner seems to be relying on isolated portions of Watson rather than considering Watson as a whole for what it would likely suggest to one of ordinary skill in the art. The outset of the detailed description of Watson (col.2, lines 7-11) states that the “present invention” of Watson is based on the broad alloy composition having 3-16% of scandium. Watson goes on to state (col.2, lines 31) that the problem addressed relates to the dispersion of  $Al_3Sc$  particles in this alloy. Thus, even though the Examiner may be able to point to isolated portions of Watson which, out of context, might seem to support the Examiner’s interpretation, Watson as a whole is explicitly limited to alloys that include scandium. The use of scandium is required, not an optional or merely preferred embodiment. Watson does not therefore suggest that erbium, ytterbium, and scandium are equivalents that can be freely substituted for one another.

Claims 1-5, 7, 8, 10-16, and 27-29 were rejected under §103(a) as being unpatentable over Higashi. The Examiner responds that Higashi does not teach a way from using greater than

10% rare earth element because the additional amount of rare earth element is “wasted” and would provide the same properties. However, Higashi seems to suggest that because of crystallization, the strength would be reduced (see column 2, lines 46-50). Therefore, using an amount greater than 10% would not be equivalent to using less than 10%.

Claims 1-3, 7-12, 15, 16, 26 and 27 were rejected under §103(a) as being unpatentable over EP ‘911. The Examiner reiterates the argument that the claimed minor alloy elements are inherently included as impurities in the composition of EP ‘911. In response to Applicant’s prior arguments, the Examiner states that Applicant has offered no evidence that the inevitable impurities of aluminum alloys are not “minor alloy elements.” However, the burden is on the Examiner to establish *prima facie* obviousness and that the claimed “at least one minor alloy element comprising copper, zinc, silver, magnesium, tin, titanium, cobalt or calcium” would necessarily be present. The “ASM Specialty Handbook, Properties of Pure Aluminum” that the Examiner points to as evidence seems to merely list possible impurity elements and does not explicitly state that all of the listed elements would necessarily be present. Further, since the elements are impurities, one could not pick and choose which elements are present. Additionally, claims 28 and 29 suggest that an “alloy element” is present in greater concentrations than the impurity elements.

Claims 5 and 6 were rejected under §103(a) as being unpatentable over Watson in view of Higashi. As discussed above, Watson does not suggest that erbium, ytterbium, and scandium are equivalents that can be freely substituted for one another. Therefore, adding the teachings of Higashi does not resolve the noted issues with Watson and the rejection should be withdrawn.

Applicant believes that no additional fees are due; however, the Commissioner is authorized to charge Deposit Account No. 21-0279 in the name of United Technologies Corporation for any additional claim fees.

Respectfully submitted,

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